

**REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

**Status of the claims**

Claims 24-51 were pending in the subject application, of which claims 49 and 50 had been withdrawn from consideration by the Examiner. Hence, claims 24-48 and 51 were pending and under active consideration.

With this Response, claim 24 has been amended to incorporate the language of claim 25, thereby necessitating the cancellation of the latter claim. No claims have been newly added. Hence, upon entry of this paper, claims 24, 26-51 will remain be pending in the subject application with claims 24, 26-48 and 51 being under active consideration.

**Statement of the substance of an Interview**

Undersigned counsel for Applicants wishes to sincerely thank Examiner Bekker for extending the courtesy of a telephonic Interview on October 09, 2009. During the Interview, counsel characterized the invention as comprising vacuoles that have a superior capacity to entrap gas, which could be attributed, in part, to a concentration of protein in the walls of the vacuoles (*e.g.*, at least 85% by weight) far higher than ever reported in the prior art.

The Examiner, however, reiterated and maintained her position that because Chmiel teaches a creamer powder that comprises about 0.05-0.5% coffee aroma components, about 0.01-0.1 % soluble coffee solids, wherein “the remaining components include *one* or more proteins, fats, and carbohydrates,”<sup>1</sup> that Chmiel may in interpreted, by implication, to teach a creamer that “contains 99.04-99.4% proteins or consists essentially of proteins and contains no added carbohydrates.”<sup>2</sup>

Applicants’ counsel, however, suggested that even if the Office were to draw such an expansive interpretation, certainly, one of ordinary skill in the art would not. In support of

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<sup>1</sup> Chmiel, para. 0018-0019 (emphasis by Examiner).

<sup>2</sup> Office Action, page 3.

evidence of Applicants' position, counsel indicated that a reference manual on creamers providing typical ingredients and their concentrations would be submitted in Response to the outstanding Office Action.

The Examiner kindly agreed that an evidentiary showing of coffee creamers having a typical concentration of protein outside of the claimed range would likely overcome, at least, the rejections under Section 102. Applicants thank the Examiner for this consideration.

### **Claim rejections under 35 U.S.C. § 102**

Claims 24-35, 38-43, 45, 46, and 51 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Chmiel *et al.* (US 2002/0018839 A1). The Examiner has determined that Chmiel teaches each and every element of the claimed invention. For example, as noted above, the Examiner has interpreted Chmiel to *impliedly* disclose a composition containing 99.04-99.4% proteins. As will be next explained, however, such an interpretation would not have been reasonably adopted by the ordinary artisan. Hence, Applicants respectfully traverse the rejection.

At the outset, the disclosure of Chmiel itself, belies the interpretation adopted by the Examiner. Chmiel teaches, at paragraph 0020, that the creamer powder may contain, *inter alia*, "about 15% to about 30% by weight of non-fat milk solids and about 5% to about 20% by weight of sweet whey." Even if it were granted that each of these components were entirely composed of protein,<sup>3</sup> the total concentration of protein would still amount to just 50% by weight. At paragraph 0021, Chmiel teaches a composition comprising "about 0.5% to about 6% by weight of protein," such as sodium caseinate; and at paragraph 0022, Chmiel discloses a further example containing "about 5% to about 16% by weight of milk proteins."

Moreover, the creamer powders in the documents *referenced* by Chmiel—*i.e.*, EP 0885566<sup>4</sup>; EP 0891715<sup>5</sup>; US 4748040<sup>6</sup>; US 6287616<sup>7</sup>; US 6872416<sup>8</sup>—as well do not

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<sup>3</sup> To be sure, "sweet whey" protein typically comprises only about 12% by weight whey protein and about 80% by weight lactose.

<sup>4</sup> See para. 0011-0012 (teaching compositions comprising 15% to 30% by weight of non-fat milk solids and 5% to 20% by weight of sweet whey) (attached).

<sup>5</sup> See ln. 28-34 (teaching compositions comprising 15% to 40% by weight of non-fat milk solids and 1% to 20% by weight of sweet whey) (attached).

<sup>6</sup> See col. 1, ln. 34-40 (teaching compositions comprising 5% to 16% by weight proteins) (attached).

reach protein concentrations above 50% by weight, let alone above 85% by weight, as instantly claimed. And, in addition to these general disclosures, Chmiel specifically teaches “standardized solutions” for the production of creamer powder, which solutions contain at most 35% protein. *See Example 1.*

Indeed, Applicants respectfully submit that the protein concentrations mentioned in Chmiel and in the references cited by Chmiel are in keeping with what would have been expected and understood by the ordinary artisan. As evidence, submitted herewith, is a publication on “Milk Powder Technology: Evaporation and Spray Drying,” which reference explicitly teaches that a “typical composition” of a coffee-whitener comprises protein (*i.e.*, Na-caseinate) at a concentration of 3-5%.<sup>9</sup> See also, a recent textbook, entitled “Diary powders and concentrated milk products,” concurring that a “typical composition” of coffee-whitener comprises 2.5% protein.<sup>10</sup>

Neither of these references teaches that coffee foamers have a different chemical make up. Nevertheless, to assuage any concern that the Examiner may have, Applicants further submit the following publications (attached), which are referenced on page 273 of the above-mentioned textbook for creamers having a “foaming effect”:

Authors	Document	Relevant Disclosure	Citation
Stuglik, <i>et al.</i>	WO 1997/025882	No specific disclosure on protein concentration, <i>per se</i> , but provides example having 47% maltodextrin; 30% skim milk. <sup>11</sup>	Example, pg. 4, ln 16-20.
Bisperink, <i>et al.</i>	EP 1074181	The protein preferably provides about 5% to about 40% by weight of the matrix; more preferably about 10% to about 30% by weight.	Para. 0018.
Zeller, <i>et al.</i>	US 6,168,819	The total protein content of the creamer, as well as the content of partially denatured whey protein by weight, is suitably about 3-30%, preferably 5-	Col. 2, ln. 30-35.

<sup>7</sup> See col. 3, ln. 17-18 (teaching compositions comprising about 0.5% to about 6% by weight of protein) (attached).

<sup>8</sup> See col. 3, ln. 26-31 (teaching compositions comprising 15% to 30% by weight of non-fat milk solids and 5% to 20% by weight of sweet whey) (attached).

<sup>9</sup> Westergaard, Vagn, “Milk Powder Technology: Evaporation and Spray Drying,” (1994) (attached).

<sup>10</sup> Tamine, Adnan, “Diary powders and concentrated milk products,” (2009), p 271 (Chapter 8, “textbook,” attached).

<sup>11</sup> It should be appreciated that the entirety of skim milk does not consist of protein.

		20% and more preferably 10-15% by weight.	
Maier & Bachtler	US 6,964,789 <sup>12</sup>	The coffee creamer is conveniently produced by preparing a creamer solution containing the desired amount of protein, carbohydrate and lipids. For example, 30% skimmed milk, 40% lactose, 30% vegetable oil or milk fat. No specific disclosure on protein concentration, <i>per se</i>	Col. 7, ln 47-50.

What is more, USP 5,462,759, cited in the textbook as a foaming product using a “foam-stabilizing protein such as egg albumin,” teaches “powder-form foaming creamers” containing “5-40% by weight of fat, 30-80% by weight of carbohydrates, 1-10% by weight of chicken’s egg-albumen and 0-4% by weight of a stabilizing salt.”<sup>13</sup>

Taken together, Applicants respectfully submit that the Office cannot reasonably maintain that Chmiel would have been understood by the ordinary artisan to teach foaming powders containing 99.04-99.4% proteins. As such, Chmiel cannot anticipate the present invention. In face of the bounty of evidence presented herein derogating from the Office’s position, should the Office nevertheless remain unpersuaded, the Examiner is hereby respectfully requested to support the Office’s interpretation of Chmiel based on adequate evidence.<sup>14</sup>

Withdrawal of the subject rejection is respectfully requested.

### **Claim rejections under 35 U.S.C. § 103**

Claims 36 and 37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chmiel in view of Ginnette *et al.* (U.S. Patent No. 2,981,629); claims 44 and 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chmiel in view of Scinto (EP 0813815 A1); and claims 44, 47, and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chmiel in view of Bisperink *et al.* (EP 1074181 A1). Applicants respectfully disagree.

<sup>12</sup> Equivalent of EP 1198992.

<sup>13</sup> Col. 1, Summary of the Invention (emphasis added) (attached).

<sup>14</sup> M.P.E.P. 2143.03(C) (stating “if applicant challenges a factual assertion as not properly ...based upon common knowledge, the examiner *must* support the finding with adequate evidence.) (Emphasis added.)

It is axiomatic that in order to establish a *prima facie* case of obviousness, a single prior art reference or a combination of references must teach or suggest each and every claim feature of the claimed invention. Applicants respectfully submit that the proposed combination of references does not satisfy at least this requirement. None of the cited references, either alone or in combination, teaches a foaming ingredient comprising vacuoles having walls comprising at least 85% by weight proteins.

In fact, Applicants respectfully submit that nothing in the art cited could have reasonably motivated one of ordinary skill in the art to modify any of the compositions of the cited reference to reach the present invention either. Indeed, the Office has not proffered any reason, though the Office is obligated to articulate same. M.P.E.P § 2141(III). Absent such, a *prima facie* case for obviousness cannot be properly sustained.

Even assuming, *arguendo*, that the Office were to maintain the present rejection(s) for alleged obviousness, Applicants would respectfully submit that one of ordinary skill in the art could not have reasonably presaged the unexpectedly superior properties of the present invention. By way of example, the foaming properties of an embodiment of the present invention was compared to the foaming ingredient of Bisperink. *Compare* Example 1 with Examples 2 and 3, respectively.

The results may be summarized as follows:

	Invention	Coffee (Ex. 2)	Difference	Invention	Chocolate Drink (Ex. 3)	Difference
Foam Ht. (m)	0.035	0.02	<u>75%</u>	0.02	0.008	<u>67%</u>
Foam Vol. (ml)	70	40	<u>75%</u>	40	16	<u>150%</u>

Applicants respectfully submit that nothing in the prior art, let alone the art of record, would have lent credence to an expectation by the skilled artisan of achieving the superior results documented with the presently claimed foaming ingredient comprising vacuoles having walls comprising at least 85% by weight proteins and entrapped gas therein.

Withdrawal of the subject rejection is accordingly solicited.

**Conclusion**

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

By 

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